

# User's manual (short form)



**NVIP-1DN5000V/IR-1P**

**NoVus®**

## IMPORTANT SAFEGUARDS AND WARNINGS

### EMC (2004/108/EC) and LVD (2006/95/EC ) Directives



Our products are manufactured to comply with requirements of the following directives and national regulations implementing the directives:

- Electromagnetic compatibility EMC 2004/108/EC.
- Low voltage LVD 2006/95/EC with further amendment. The Directive applies to electrical equipment designed for use with a voltage rating of between 50VAC and 1000VAC as well as 75VDC and 1500VDC.

### WEEE Directive 2002/96/EC



#### Information on Disposal for Users of Waste Electrical and Electronic Equipment

This appliance is marked according to the European Directive on Waste Electrical and Electronic Equipment (2002/96/EC) and further amendments. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

The symbol on the product, or the documents accompanying the product, indicates that this appliance may not be treated as household waste. It shall be handed over to the applicable collection point for used up electrical and electronic equipment for recycling purpose. For more information about recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

### RoHS Directive 2002/95/EC



Out of concern for human health protection and friendly environment, we assure that our products falling under RoHS Directive regulations, regarding the restriction of the use of hazardous substances in electrical and electronic equipment, have been designed and manufactured in compliance with the above mentioned regulations. Simultaneously, we claim that our products have been tested and do not contain hazardous substances whose exceeding limits could have negative impact on human health or natural environment

### Information

The device, as a part of professional CCTV system used for surveillance and control, is not designed for self installation in households by individuals without technical knowledge.

### Excluding of responsibility in case of damaging data on a disk or other devices:

The manufacturer does not bear any responsibility in case of damaging or losing data on a disk or other devices during device operation.

### WARNING!

PRIOR TO UNDERTAKING ANY ACTION THAT IS NOT DESCRIBED FOR THE GIVEN PRODUCT IN USER'S MANUAL AND OTHER DOCUMENTS DELIVERED WITH THE PRODUCT, OR IF IT DOES NOT ARISE FROM THE USUAL APPLICATION OF THE PRODUCT, MANUFACTURER MUST BE CONTACTED UNDER THE RIGOR OF EXCLUDING THE MANUFACTURER'S RESPONSIBILITY FOR THE RESULTS OF SUCH AN ACTION.

## IMPORTANT SAFEGUARDS AND WARNINGS

### **WARNING!**

THE KNOWLEDGE OF THIS MANUAL IS AN INDISPENSIBLE CONDITION OF A PROPER DEVICE OPERATION. YOU ARE KINDLY REQUESTED TO FAMILIARIZE YOURSELF WITH THE MANUAL PRIOR TO INSTALLATION AND FURTHER DEVICE OPERATION.

### **WARNING!**

USER IS NOT ALLOWED TO DISASSEMBLE THE CASING AS THERE ARE NO USER-SERVICEABLE PARTS INSIDE THIS UNIT. ONLY AUTHORIZED SERVICE PERSONNEL MAY OPEN THE UNIT

INSTALLATION AND SERVICING SHOULD ONLY BE DONE BY QUALIFIED SERVICE PERSONNEL AND SHOULD CONFORM TO ALL LOCAL REGULATIONS

1. Prior to undertaking any action please consult the following manual and read all the safety and operating instructions before starting the device.
2. Please keep this manual for the lifespan of the device in case referring to the contents of this manual is necessary;
3. All the safety precautions referred to in this manual should be strictly followed, as they have a direct influence on user's safety and durability and reliability of the device;
4. All actions conducted by the servicemen and users must be accomplished in accordance with the user's manual;
5. The device should be disconnected from power sources during maintenance procedures;
6. Usage of additional devices and components neither provided nor recommended by the producer is forbidden;
7. You are not allowed to use the camera in high humidity environment (i.e. close to swimming pools, bath tubs, damp basements);
8. Mounting the device in places where proper ventilation cannot be provided (e. g. closed lockers etc.) is not recommended since it may lead to heat build-up and damaging the device itself as a consequence;
9. Mounting the camera on unstable surface or using not recommended mounts is forbidden. Improperly mounted camera may cause a fatal accident or may be seriously damaged itself. The camera must be mounted by qualified personnel with proper authorization, in accordance with this user's manual.
10. Device should be supplied only from a power sources whose parameters are in accordance with those specified by the producer in the camera technical datasheet. Therefore, it is forbidden to supply the camera from a power sources with unknown parameters, unstable or not meeting producer's requirements;

Due to the product being constantly enhanced and optimized, certain parameters and functions described in the manual in question may change without further notice. We strongly suggest visiting the [www.novuscctv.com](http://www.novuscctv.com) website in order to access the newest manual

Data included in the following user's manual is up to date at the time of printing. AAT Holding Sp z o.o. holds exclusive rights to modify this manual. The producer reserves the rights for device specification modification and change in the design without prior notice.

## TABLE OF CONTENTS

<b>TABLE OF CONTENTS</b> .....	4
<b>1. FOREWORD INFORMATION</b> .....	5
1.1. General Characteristics.....	5
1.2. NVIP-1DN5000V/IR-1P tech specification .....	6
1.3. Camera dimension .....	7
1.4. Package contents.....	8
<b>2. START-UP AND INITIAL IP CAMERA CONFIGURATION</b> .....	9
2.1. Description of connectors and control tools .....	9
2.2. Cable connectors.....	10
2.3. NVIP-1DN5000V/IR-1P mounting .....	10
2.4. Starting the IP camera .....	11
2.5. Initial configuration via the Web browser.....	12
<b>3. NETWORK CONNECTION UTILIZING WEB BROWSER</b> .....	15
3.1. Recommended PC specification for web browser.....	15
3.2. Connection with IP camera via the Internet Explorer.....	15
<b>4. WWW INTERFACE - WORKING WITH IP CAMERA</b> .....	17
4.1. Displaying live pictures.....	17
<b>5. ELECTRIC CONNECTORS AND ACCESORIES</b> .....	19
5.1. Connecting power supply to the camera. ....	19
5.2. Connecting alarm inputs and outpust.....	19
5.3. SD card installation .....	19
<b>6. RESTORING FACTORY DEFAULTS</b> .....	20
6.1. Restoring software factory defaults .....	20
6.2. Restoring hardware factory defaults in IP cameras .....	20

## FOREWORD INFORMATION

### 1. FOREWORD INFORMATION

#### 1.1. General Characteristics

- Imager resolution: 1.3 megapixels
- Mechanical IR cut filter
- IR operation capability
- Min. Illumination from 0,034 lx/F=2.2 , 0 lx (IR on)
- Digital Slow Shutter (DSS)
- Digital Noise Reduction (DNR)
- Lens  $f=3.6m/F=2.2$
- Built-in IR LED - 1 pcs., up to 6 m
- Privacy zones: 5
- Compression: H.264, M-JPEG
- Max video processing resolution : 1280x960
- Triple stream mode: compression, resolution, speed and quality defined individually for two video streams
- RTP/RTSP protocol support for video transmission
- Pre & post-alarm functions
- Hardware motion detection
- Built-in webserver: camera configuration through the website
- MicroSD/SDHC card support
- Wide range of responses to alarm events: e-mail with attachment, saving file on FTP and NAS server, saving file on microSD card,
- Network protocol support : ONVIF(2.2) ,HTTP, TCP/IP, IPv4/v6, UDP/IP, RTSP, FTP, DHCP, NTP, PPPoE, SMTP
- Software: NMS (NOVUS MANAGEMENT SYSTEM) for video recording, live monitoring, playback and remote IP devices administration
- Power supply: 12VDC, PoE (Power over Ethernet)

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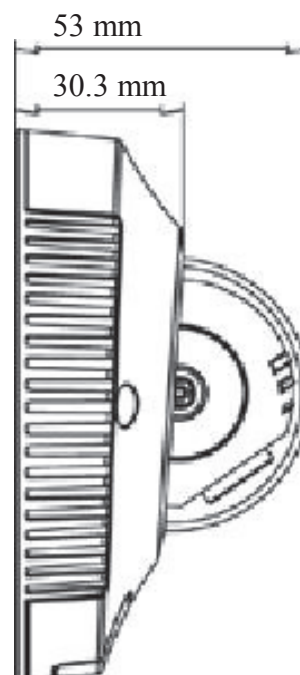
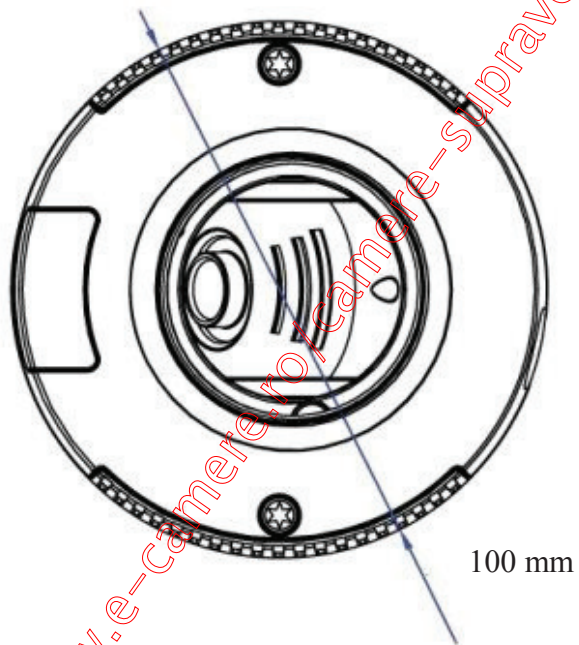
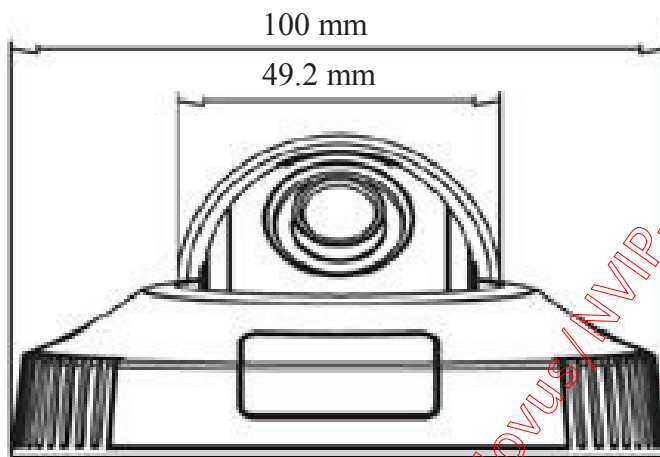
## FOREWORD INFORMATION

### 1.2. NVIP-1DN5000V/IR-1P specification

NVIP-1DN5000V/IR-1P	
<b>IMAGE</b>	
Pick-up Element	1.3 MPX, CMOS imager, 1/3"
Number of Effective Pixels	1280 (H) x 960 (V)
Min. Illumination	0.67 lx/F=2.2 – color mode (DSS off), 0.034 lx/F=2.2 – color mode (DSS on), 0 lx (IR on) – b/w mode
Digital Slow Shutter (DSS)	X5
Digital Noise Reduction (DNR)	Yes
<b>LENS</b>	
Type	Standard, f=3.6 mm/F=2.2
Angle of View (H)	73°
<b>DAY/NIGHT</b>	
Type	Mechanical IR cut filter
Switch Mode	Auto, manual
<b>NETWORK</b>	
Stream Resolution	1280 x 960, 1280 x 720 (HD 720), 640 x 480 (VGA), 640 x 360 (nHD)
Frame Rate	30 fps for each resolution
Multistreaming Mode	3 streams
Video/Audio Compression	H.264, M-JPEG, M-JPEG/G.711, RAW_PCM
Number of Simultaneous Connections	Max. 10
Network Protocols Support	ONVIF(2.2), HTTP, TCP/IP, IPv4/v6, UDP/IP, RTSP, FTP, DHCP, NTP, PPPoE, NTP, SMTP
PC Software	NOVUS NMS, Internet Explorer, Google Chrome, Opera, Mozilla Firefox
<b>OTHER FUNCTIONS</b>	
OSD	IE browser, Polish, English, Russian
Privacy Zones	5
Motion Detection	Yes
Prealarm/Postalarm	5 MB/0 s - 86400s
System Reaction to Alarm Events	E-mail with attachment, saving file on: FTP server/NAS/memory card,
<b>IR LED</b>	
Number	1
Range	6
Angle	90°
<b>INTERFACES</b>	
Audio Input/Output	1 x RCA/1 x RCA
Network Interface	1 x Ethernet - RJ-45 interface, 10/100 Mbit/s
Memory Card Slot	microSD
<b>INSTALLATION PARAMETERS</b>	
Dimensions (mm)	100 (Ø) x 53 (H)
Weight	320 g
Enclosure	Vandal proof, white, aluminium, polycarbonate dome
Power Supply	PoE, 12 VDC
Power Consumption	2.5 W (IR off), 5 W (IR on)
Operating Temperature	-10°C ~ 55°C
Degree of Protection	IP 66

## FOREWORD INFORMATION

### 1.3. Camera dimensions



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## FOREWORD INFORMATION

### 1.4. Package contents

After you open the package make sure that the following elements are inside:

- IP camera
- Accessories bag
- RJ45 Coupler
- BNC Test Cable
- Mounting Template
- Short version of user's manual
- CD containing manual and software

If any of this elements has been damaged during transport, pack all the elements back into the original box and contact your supplier for further assistance.

#### CAUTION!

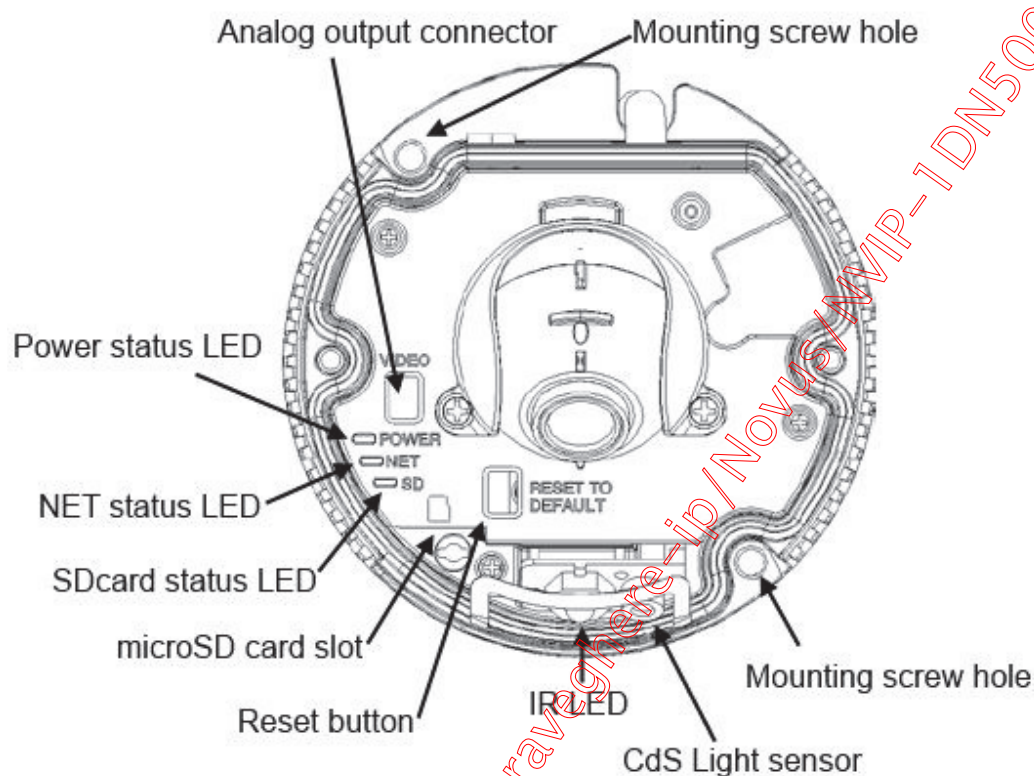
If the device was brought from a location with lower temperature, please wait until it reaches the temperature of location it is currently in. Turning the device on immediately after bringing it from a location with lower ambient temperature is forbidden, as the condensing water vapour may cause short-circuits and damage the device as a result.

Before starting the device familiarize yourself with the description and the role of particular inputs, outputs and adjusting elements that the device is equipped with.

## START-UP AND INITIAL CAMERA CONFIGURATION

### 2. START-UP AND INITIAL IP CAMERA CONFIGURATION

#### 2.1. Camera interior overview



#### 2.2. Cabel connectors



No.	Color	Description
1	-	RJ-45 male network connector
2	White	RCA Audio input
3	Red	RCA Audio output
4	-	12V DC Power In

Note:

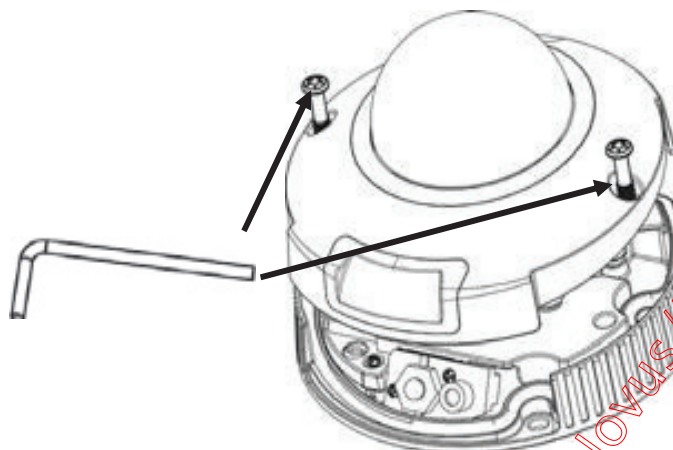
Use the included RJ45 coupler to connect to male end of RJ45 Ethernet cable.



## START-UP AND INITIAL CAMERA CONFIGURATION

### 2.3. NVIP-1DN5000V/IR-1P mounting

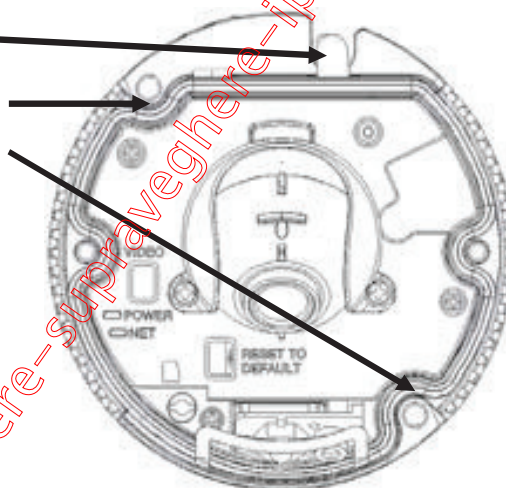
1. Use the included allen key to remove the camera cover screws (2x). Lift the cover away from the camera



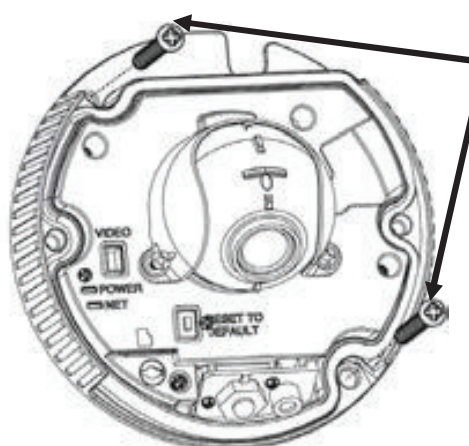
2. Use the included mounting template or the camera to mark holes for the mounting screws and cable.

Termination cables

Mounting Screw Hole



3. Mount the camera to the surface using the included mounting screws (2x)



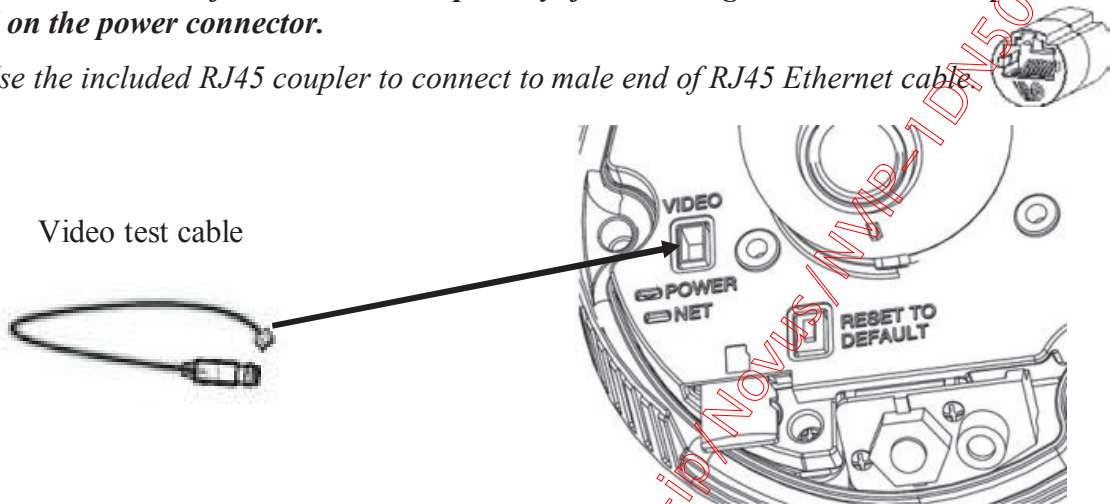
Mounting Screws

## START-UP AND INITIAL CAMERA CONFIGURATION

4. To adjust the viewing angle power up the camera. Connect to the camera using a web browser (see the chapter 2.4 for details ) or you can insert the included BNC test cable into video test cable terminals and connect to a test monitor .

**Caution :** Make sure to follow the correct polarity if connecting the camera to DC power. Polarity is marked on the power connector.

**Note :** Use the included RJ45 coupler to connect to male end of RJ45 Ethernet cable.



Loosen the screws on the sides of the and adjust the ball camera. Do not remove the screws holding the ball camera. Tighten the screws when finished.

**Note :** Ensure the ball camera is pointed in the same direction as the IR LED to ensure a good night time image.

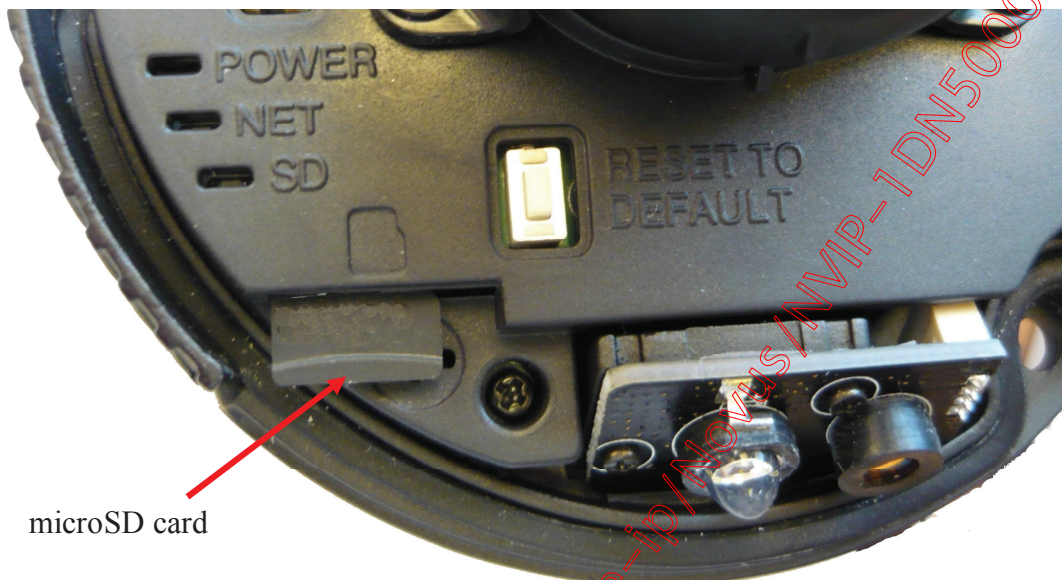
Loosen screws to adjust the angle of the camera ball

IR LED



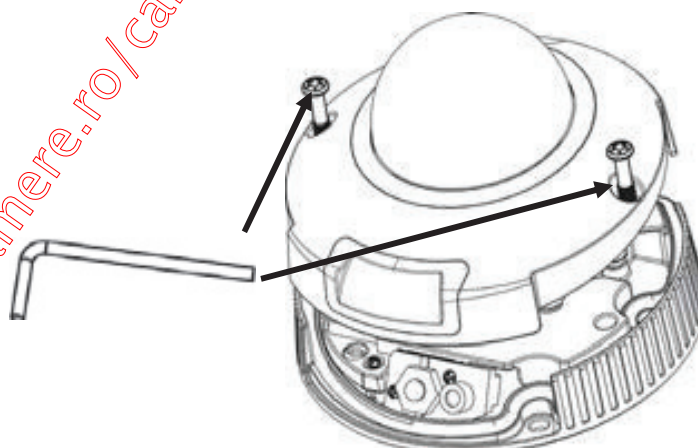
## START-UP AND INITIAL CAMERA CONFIGURATION

5. (Optional) Insert a microSD card (not in set included ) into the camera. To enable recording, you must format the microSD card and configure microSD recording.



*Note : The camera supports microSD cards up to a maximum size of 64GB. SanDisk™ or Kingston™ brand microSD cards are recommended.*

6. Ensure the rubber gasket inside the camera is properly in place, then replace the camera cover and the camera cover screws (2x).



## START-UP AND INITIAL CAMERA CONFIGURATION

### 2.4. Starting the IP camera

To run NOVUS IP camera you have to connect ethernet cable between camera and network switch with PoE support (IEEE 802.3af).

You can also connect it directly via power supply adapter with parameters compatible with camera power supply specification.

After connecting power status red LED should light on. Initialization process is then started which can take about 2 minutes. You can then proceed to connect to the camera via web browser.

If the connection is successfully established green network status LED blinks with a frequency proportional to the quantity of data sent.

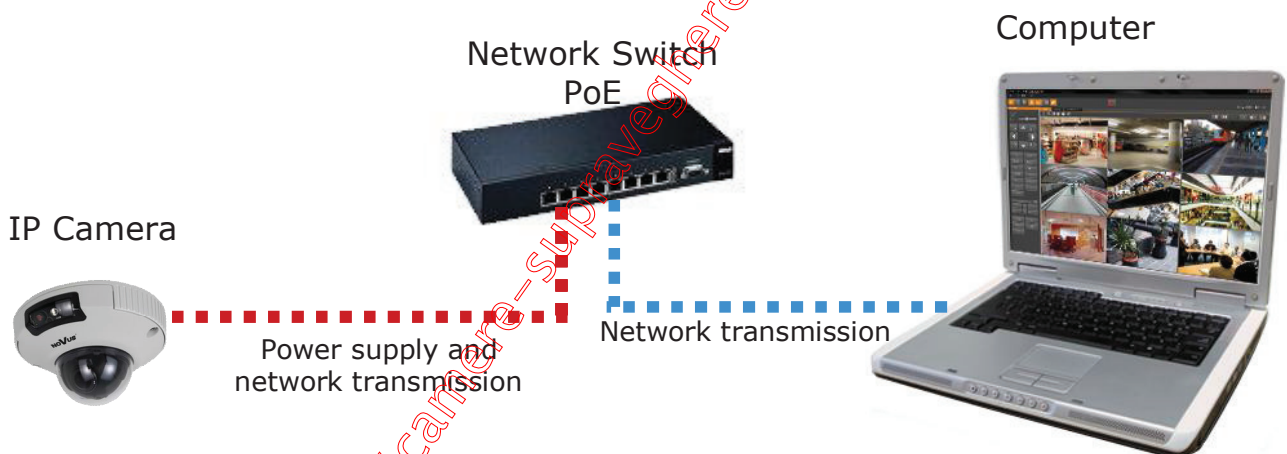
The recommended way to start an IP camera and perform its configuration is a connection directly to the network switch which is not connected to other devices. To obtain further information about network configuration parameters (IP address, gateway, network mask, etc.) please contact your network administrator.

Note : Use the included RJ45 coupler to connect to male end of RJ45 Ethernet cable.

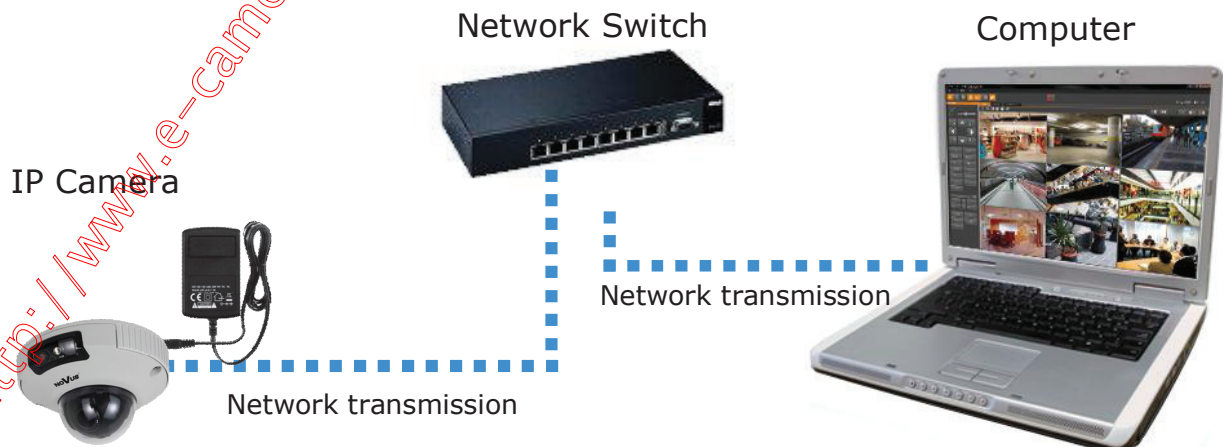
- Connection utilising network switch with PoE support



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- Connection utilising external power supply and network switch



## START-UP AND INITIAL CAMERA CONFIGURATION

- Connection utilising external power supply directly to the computer

IP Camera



Computer



Network transmission - cross over cable

Note :

Power supply adapter is not included. Please use power adapter with parameters specified in user's manual.

### Caution:

In order to provide protection against voltage surges/lightning strikes, usage of appropriate surge protectors is advised. Any damages resulting from surges are not eligible for service repairs.

### 2.5. Initial configuration via the web browser

The default network settings for NVIP-1DN5xxx IP camera series are :

1. IP address= **192.168.1.200**
2. Network mask - **255.255.255.0**
3. Gateway - **192.168.1.1**
4. User name - **root**
5. Password - **pass**

Knowing the camera's IP address you need to appropriately set PC IP address, so the two devices can operate in one network subnet ( e.g. for IP 192.168.1.1, appropriate address for the camera ranges from 192.168.1.2 to 192.168.1.254, for example 192.168.1.60). It is not allowed to set the same addresses for camera and PC computer

You can either set a network configuration (IP address, gateway, net mask, etc.) of NOVUS IP camera yourself or select DHCP mode (DHCP server is required in this method in target network) by using web browser or by NMS software. When you use DHCP server check IP address lease and its linking with camera MAC address to avoid changing or losing IP address during device operation or network/DHCP server breakdown. You have to remember to use a new camera IP address after changing network parameters.

After network setting configuration has been done, the camera can be connected to a target network.

## NETWORK CONNECTION UTILIZING WEB BROWSER

### 3. NETWORK CONNECTION UTILIZING WEB BROWSER

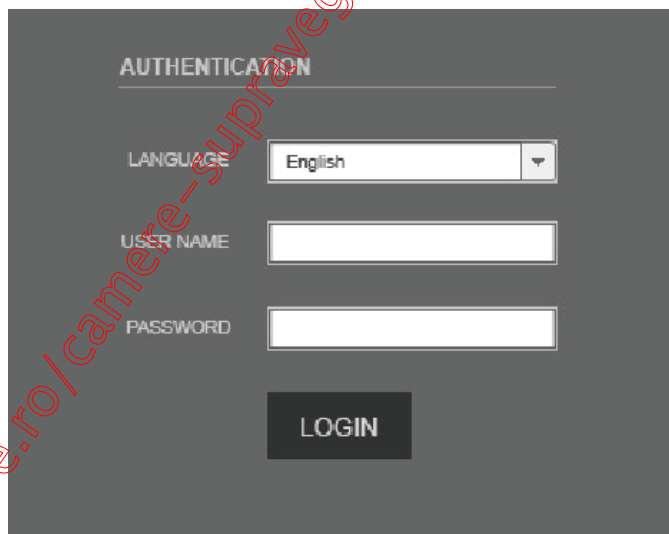
#### 3.1. Recommended PC specification for web browser connections

Requirements below apply to connection with an IP camera, assuming image display in 1280x960 resolution and 25 fps speed.

1. CPU **Intel Pentium IV 3 GHz** or newer
2. **RAM** Memory min. **512 MB**
3. VGA card (any displaying **Direct 3D with min. 128 MB RAM** memory)
4. OS **Windows XP / VISTA / Windows 7 / Windows 8**
5. **Direct X** version **9.0** or newer
6. Network card **10/100/1000 Mb/s**

#### 3.2. Connection with IP camera via the Internet Explorer

You have to enter camera IP address in the Internet Explorer address bar. If IP address is correct user login window will be displayed:



The screenshot shows a web-based authentication form. At the top, the word 'AUTHENTICATION' is displayed. Below it, there is a 'LANGUAGE' dropdown menu currently showing 'English'. Underneath the language menu are two text input fields labeled 'USER NAME' and 'PASSWORD'. At the bottom of the form is a black button with the word 'LOGIN' in white capital letters.

Default user is **root** and default password is **pass**.

In the *Language* box you can change the display language. The default language is English.

For safety reasons, it is recommended to change default user name and password.

It is possible to connect to the camera using Internet Explorer, Mozilla Firefox, Chrome or Opera browsers. Running the IP camera in this browsers are very similar.

## NETWORK CONNECTION UTILIZING WEB BROWSER

If your computer has Flash Player installed, the main screen for the camera web interface opens. From here you can view and configure the camera.

**Caution:** If your computer does not have Flash Player installed, you will be prompted to select if you would like to use ActiveX or Flash Player to connect to the camera:

[Click here to shift playing live video with short delay widget!](#)

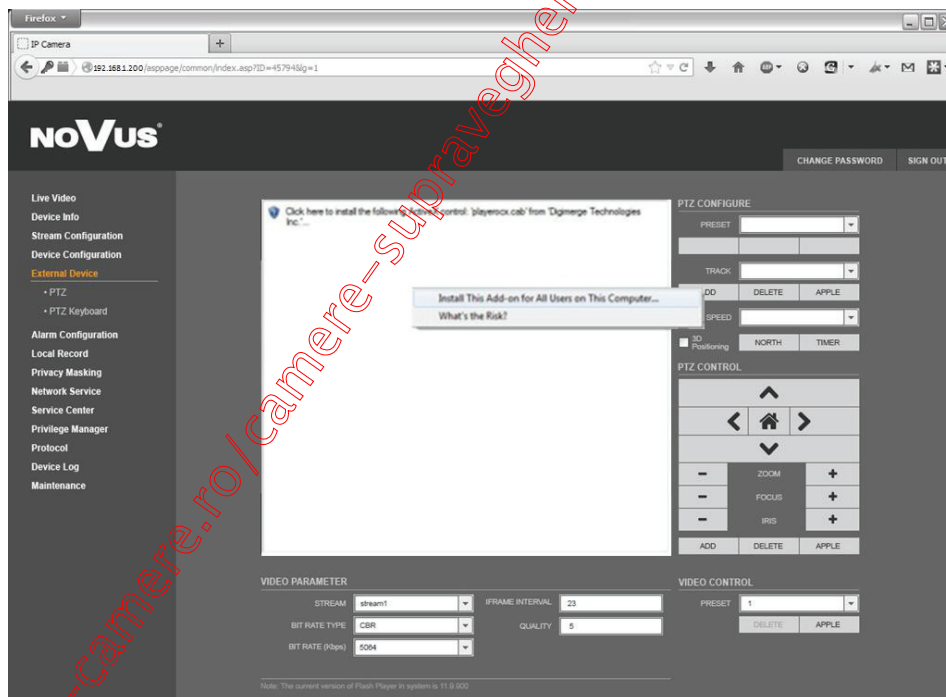


The Flash version you are using is out-of-date, which causes pages could not be displayed properly. Please use Flash Player 11.2.0 or higher version.

• It does not find the Flash Player. Maybe it is not be used or be invalid.

• Please download the latest version of Flash Player

- Click *Click here to shift playing life video with short delay widget!* to play live video with ActiveX control to reduce latency (recommended): Uses an ActiveX plug-in to connect to the camera. To install the plug-in, click on the video area, and select *Install this Add-on for all users on this computer*, and follow the prompts.



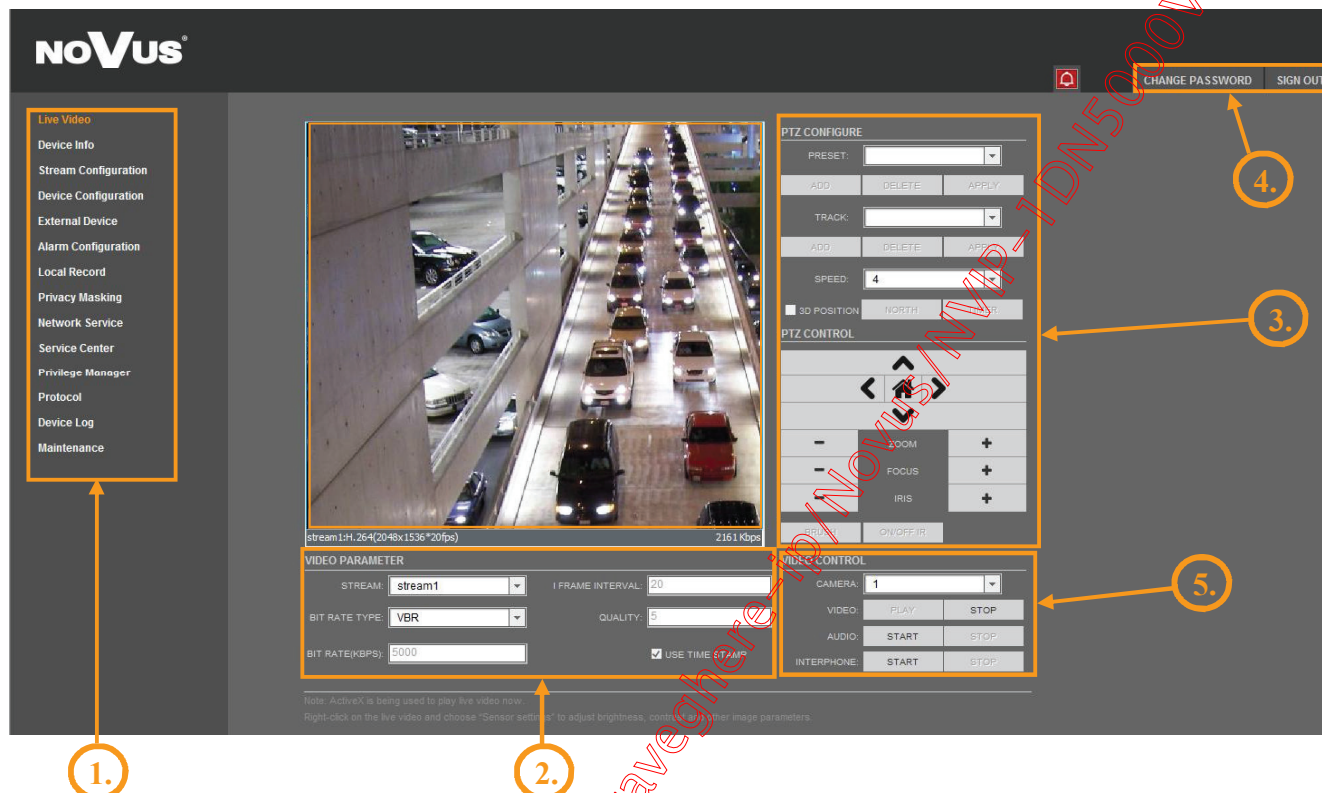
- Click *Please download the latest version of Flash Player* to play live video: Opens a link to download Flash Player from Adobe's website. After completing the installation, restart your browser and reconnect to the camera.

**Caution:** In Windows Vista/7/8 the ActiveX applet may be blocked by Windows Defender or User account control. In such case you should allow to run this applet, or simply disable these functions.

## WWW INTERFACE - WORKING WITH IP CAMERA

### 4. WWW INTERFACE - WORKING WITH IP CAMERA

#### 4.1. Displaying live pictures



#### 1. Camera settings

- |                      |   |
|----------------------|---|
| Live Video           | - Live video preview  |
| Device Info          | - Device information  |
| Stream Configuration | - Video and audio settings for each stream                      |
| Device Configuration | - Device configuration (e.g. Local Network, Date&Time)          |
| External Device      | - External device configuration (function unavailable)          |
| Alarm Configuration  | - Alarm Configuration (Motion alarm, Alarm I/O)                 |
| Local Record         | - Local Record Configuration                                    |
| Privacy Masking      | - Configuration up to 5 privacy masks                           |
| Network Service      | - Network services configuration (e.g. DDNS)                    |
| Service Center       | - Service center configuration (e.g. SMTP)                      |
| Privilege Manager    | - Users and groups management                                   |
| Protocol             | - Protocols settings (e.g. ONVIF)                               |
| Device Log           | - Device Log contains: Operation Log, Alarm Log and Collect Log |
| Maintenance          | - Device Restart and restoring Default Settings                 |

## WWW INTERFACE - WORKING WITH IP CAMERA

### 2. Video Parameter

Stream	- Stream ID (choose one from available streams)
Bite Rate Type	- Bit rate type
Bit Rate (kbps)	- Bit rate
I Frame Interval	- I frame interval
Quality	- Quality
USE TIME STAMP	- Video buffer (increases delay when enabled, maximum delay is 5s)

NOTICE: *USE TIME STAMP* function will not be available when using Flash instead of Activex.

### 3. Camera Control

Function unavailable.

### 4. Menu bar

Change Password	- Change users password
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NOTICE: Default password "pass" can be restored only after restoring default settings of the camera)

Sign Out	- Log out from camera
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### 5. Video Control

Camera	- Default number of the camera is 1.
Video	- Turn on/off video
Audio	- Turn on/off audio
Interphone	- Turn on/off Interphone

NOTICE: *Audio and Interphone* functions will not be available when using Flash instead of Activex.

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## ELECTRIC CONNECTORS AND ACCESORIES

### 5. ELECTRIC CONNECTORS AND ACCESORIES

#### 5.1. Connecting power supply to the camera.

The camera can be supplied by using RJ45 network socket or by power connector. To run NOVUS IP camera you can connect ethernet cable between camera and network switch with PoE support (IEEE 802.3af). You can also use a power injector with (IEEE 802.3af) PoE standard. Use power supply with parameters compatible with camera specification to power camera via power in jack.

*Information:*

*Power supply adapter is not included. Please use power adapter with parameters specified in user's manual.*

**Caution:**

**Make sure to follow the correct polarity if connecting the camera to DC power. Polarity is marked on the power connector.**

**In order to provide protection against voltage surges/lightning strikes, usage of appropriate surge protectors is advised. Any damages resulting from surges are not eligible for service repairs.**

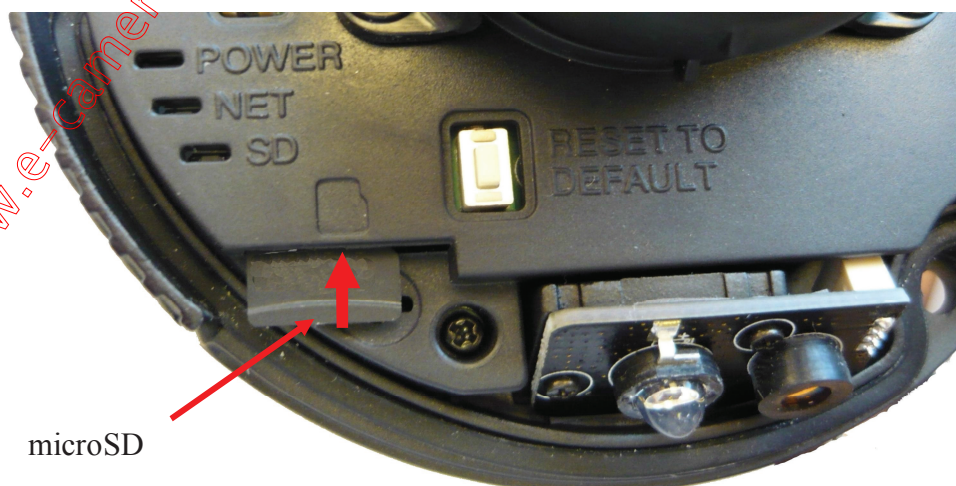
#### 5.2. Connecting audio inputs/outputs.

Color	Description
White	RCA Audio input— Connect to a self-powered microphone for listen-in audio.
Red	RCA Audio output— Connect to an amplifier or self-powered speaker for intercom/2-way audio

#### 5.3. SD card installation

Camera supports microSD and microSDHC cards with their capacity up to 16GB. In order to install the card properly, please follow the instructions below:

- Turn the camera off
- Mount microSD card in the socket , according to the picture:



## ELECTRIC CONNECTORS AND ACCESORIES

- Turn the camera on
- Format the card in SDVideo (recommended) or Ext3 file system using a IP camera.  
Click *Local Record* -> *Record Directory*. Under *Disk Name*, select *SD1*. Click *Modify*. The *Record Disk Path* menu opens. Uncheck *Enable*. Under *File System*, select *SDVideo* or *Ext3*. Click *Format*. A window will appear to show the status of the formatting. Wait for the formatting to complete and then click *OK*.
- Check the SD card by checking its capacity in the *Local Record* -> *Record Directory* tab.

### 6. RESTORING FACTORY DEFAULTS

NOVUS IP cameras allow to restore defaults via:

- Software (web browser level) resetting the camera settings
- Hardware (using reset) restores factory defaults.

#### 6.1. Restoring software factory defaults

Restoring factory software default can restore default settings of the IP camera ,optionally network settings can be saved.

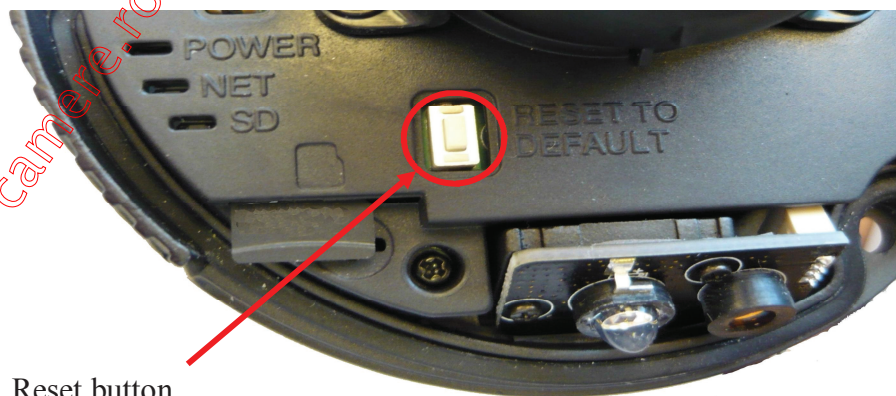
Logon to the camera and choose *MAINTENANCE*> *DEFAULT SETTINGS*.

- Check the *Save the IP setting* box to preserve IP seting after restore.
- Click *Restore* button. The camera re-starts then, taking about two minutes to complete.
- Log on approx. using default user name (root) and password (pass)

#### 6.2. Restoring hardware factory defaults in IP cameras

In order to restore factory defaults for the camera please follow the instructions:

- Remove the camera cover screws (2x) and remove the camera cover
- Press and hold the white reset button for 5 seconds then release the button to reset the camera to factory defaults



- Re-attach the camera cover and replace the camera cover screws (2x)
- Log on after approx. 2 minutes using default IP address (<http://192.168.1.200>) and default user name (root) and password (pass)